# Package 'radarBoxplot'

October 7, 2021

**Title** Implementation of the Radar-Boxplot

**Version** 1.0.5

**Description** Creates the radar-boxplot, a plot that was created by the author during his Ph.D. in forest resources.
The radar-boxplot is a visualization feature suited for multivariate classification/clustering. It provides an intuitive deep understanding of the data.

**Suggests** ggplot2

**Depends** R (>= 3.5)

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.1.2

**URL** https://github.com/caiohamamura/radarBoxplot-R, https://radarboxplot.r-forge.r-project.org/

**BugReports** https://github.com/caiohamamura/radarBoxplot-R/issues

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**Repository** CRAN

**Repository/R-Forge/Project** radarboxplot

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**NeedsCompilation** no

## R topics documented:

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`radarBoxplot` *Function to plot the radar-boxplot*

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## Description

Function to plot the radar-boxplot

## Usage

```
radarBoxplot(x, ...)

## S3 method for class 'formula'
radarBoxplot(x, data, ...)

## Default S3 method:
radarBoxplot(
  x,
  y,
  IQR = 1.5,
  use.ggplot2 = FALSE,
  mfrow = NA,
  oma = c(5, 4, 0, 0) + 0.1,
  mar = c(0, 0, 1, 1) + 0.1,
  innerPolygon = list(),
  outerPolygon = list(),
  innerBorder = list(),
  outerBorder = list(),
  medianLine = list(),
  outlierPoints = list(),
  nTicks = 4,
  ticksArgs = list(),
  axisArgs = list(),
  labelsArgs = list(),
  angleOffset = NA,
  ...
)
```

## Arguments

| | |
|---|---|
| x | a data frame or matrix of attributes or a formula describing the attributes for the class |
| ... | parameter to allow the usage of S3 methods |
| data | dataset for fomula variant for which formula was defined |
| y | a response vector |

| | |
|---|---|
| IQR | numeric. The factor to multiply the IQR to define the outlier threshold. Default 1.5 |
| use.ggplot2 | if ggplot2 are available it will use ggplot for plotting: Default FALSE |
| mfrow | mfrow argument for defining the subplots nrows and ncols: Default will calculate the minimum square |
| oma | outer margins of the subplots: Default c(5,4,0,0) + 0.1 |
| mar | margins of the subplots: Default c(0,0,1,1) + 0.1 |
| innerPolygon | a list of optional arguments to override Q2-Q3 ‘graphics::polygon()‘ style: Default list() |
| outerPolygon | a list of optional arguments to override the outer (range) ‘graphics::polygon()‘ default style: Default list() |
| innerBorder | a list of optional arguments to override the inner border ‘graphics::lines()‘ default style: Default list() |
| outerBorder | a list of optional arguments to override the outer border ‘graphics::lines()‘ default style: Default list() |
| medianLine | a list of optional arguments to override the median line ‘graphics::lines()‘ default style: Default list() |
| outlierPoints | a list of optional arguments to override the outliers ‘graphics::points()‘ default style: Default list() |
| nTicks | number of ticks for the radar chart: Default 4 |
| ticksArgs | a list of optional arguments to override radar ticks ‘graphics::lines()‘ default style: Default list() |
| axisArgs | a list of optional arguments to override radar axis ‘graphics::lines()‘ default style: Default list() |
| labelsArgs | a list of optional arguments to override labels ‘graphics::text()‘ default style: Default list() |
| angleOffset | offset for rotating the plots: Default will let the top free of axis to avoid its label overlapping the title |

## Examples

```
library(radarBoxplot)
data("winequality_red")

# Regular
radarBoxplot(quality ~ ., winequality_red)

# Orange and green pattern with grey median
radarBoxplot(quality ~ ., winequality_red,
             use.ggplot2=FALSE, medianLine=list(col="grey"),
             innerPolygon=list(col="#FFA500CC"),
             outerPolygon=list(col=rgb(0,.7,0,0.6)))

# Plot in 2 rows and 3 columns
# change columns order (counter clockwise)
```

```
radarBoxplot(quality ~ volatile.acidity + citric.acid +
             residual.sugar + fixed.acidity + chlorides +
             free.sulfur.dioxide + total.sulfur.dioxide +
             density + pH + sulphates + alcohol,
             data = winequality_red,
             mfrow=c(2,3))
```

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`winequality_red` *Red Wine Quality Dataset*

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## Description

Related to red vinho verde wine samples, from the north of Portugal. The goal is to model wine quality based on physicochemical tests

## Usage

```
winequality_red
```

## Format

A data frame with 1599 rows and 12 variables:

## Source

https://archive.ics.uci.edu/ml/datasets/wine+quality

## References

P. Cortez, A. Cerdeira, F. Almeida, T. Matos and J. Reis. Modeling wine preferences by data mining from physicochemical properties. In Decision Support Systems, Elsevier, 47(4):547-553, 2009.

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`winequality_white` *White Wine Quality Dataset*

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## Description

Related to white vinho verde wine samples, from the north of Portugal. The goal is to model wine quality based on physicochemical tests

## Usage

```
winequality_white
```

## Format

A data frame with 4898 rows and 12 variables:

## Source

https://archive.ics.uci.edu/ml/datasets/wine+quality

## References

P. Cortez, A. Cerdeira, F. Almeida, T. Matos and J. Reis. Modeling wine preferences by data mining from physicochemical properties. In Decision Support Systems, Elsevier, 47(4):547-553, 2009.

# Index